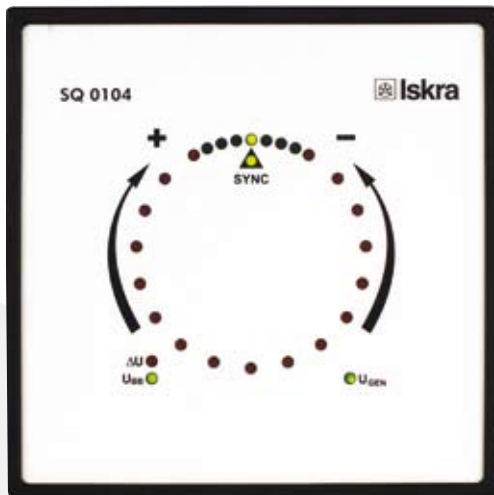
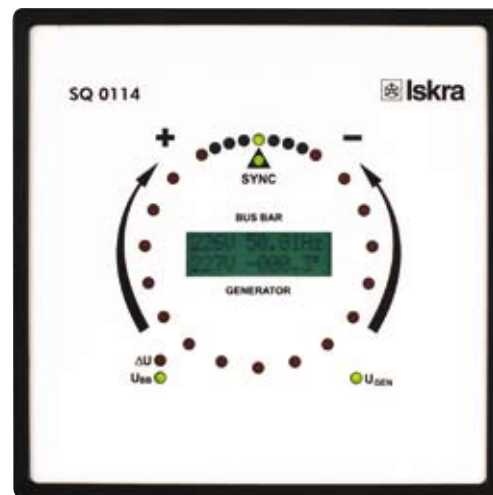


## SQ 0x04, SQ 0x14 - SYNCHRONIZATION METERS FOR MANUAL OR SEMIAUTOMATIC SYNCHRONISING

**NEW!**



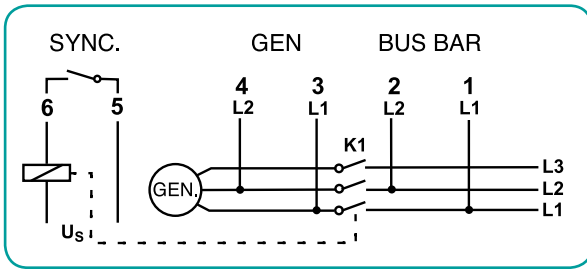
**NEW!**



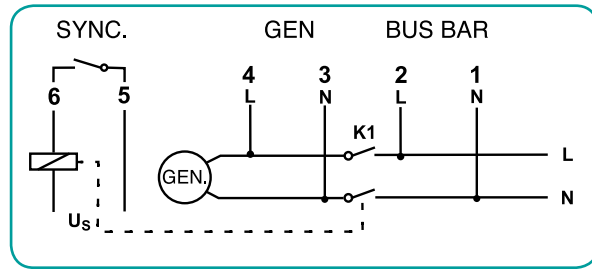
### FEATURES:

- MEASUREMENT OF PHASE DIFFERENCE BETWEEN BUS BAR AND GENERATOR
- FIVE INSTRUMENTS IN ONE (SQ 0x14)
- CIRCULAR DISPLAY OF  $\Delta \varphi$  PHASE DIFFERENCE
- MAGNIFIED DISPLAY OF PHASE DIFFERENCE  $\Delta \varphi = \pm 20$  DEGREE
- MICROPROCESSOR PROCESSING
- SIMPLE SYNCHRONISATION CONDITIONS SETTING
- OUTPUT RELAY FOR SYNCHRONISATION (PULSE OR CONTINUOUS)
- "DEAD BUSBAR" FUNCTIONALITY
- POWER SUPPLY FROM BUS BAR OR GENERATOR
- STANDARD 96x96 mm OR 144x144 mm DIN HOUSING
- LCD WITH BACKLIGHT FOR VOLTAGE, FREQUENCY AND/OR  $\Delta \varphi$  MONITORING (SQ 0x14 ONLY)
- FLASH MEMORY
- HIGH IMMUNITY TO EMC DISTURBANCES
- SPECIAL FUNCTIONS SET WITH THREE JUMPERS INSIDE THE INSTRUMENTS
- STATUS OUTPUT
- GREEN LED FOR INDICATION OF BOTH VOLTAGES
- LLOYD'S AND HRB CERTIFICATES (SQ 0204, SQ 0214)

### Phase to phase connection



### Phase to neutral connection



Connection terminal number	Connection designation	Usage of terminal
1	L1 <sup>1</sup>	System's voltage
2	L2 <sup>1</sup>	System's voltage
3	L1 <sup>1</sup>	Generator's voltage
4	L2 <sup>1</sup>	Generator's voltage
5	SYNC.	Relay output
6	SYNC.	Relay output
7	STATUS	Status output
8	STATUS	Status output

### ORDERING INFO FOR SQ 0x04, SQ 0x14

SQ 0114 - E L 2 2 0 0 0

Type \_\_\_\_\_

SQ 0104  
SQ 0114  
SQ 0204  
SQ 0214

Voltage inputs \_\_\_\_\_

A - 57 V  
B - 63 V  
C - 100 V  
D - 110 V  
E - 230 V  
F - 400 V  
G - 500 V  
X - nonstandard voltage input

Type of connection \_\_\_\_\_

L - phase to phase  
N - phase to neutral

Output relay \_\_\_\_\_

1 - impulse 100 ms  
2 - impulse 300 ms  
3 - other impulse length (100 ms < x < 1000 ms) to be specified with order  
4 - continual impulse  
0 - without relay

"Dead busbar" function \_\_\_\_\_

0 - none  
1 - 10% Un  
2 - 20% Un  
3 - 30% Un  
4 - 40% Un

Status output (ship version option) \_\_\_\_\_

0 - none  
S - status relay

Potentiometer for setting  $\Delta \varphi$  \_\_\_\_\_

0 - default value +/- 20 el.  
+ - setting range +20 el.  
-- setting range -20 el.

Display (SQ 0x14 only) \_\_\_\_\_

0 - default (displayed value equal to voltage input)  
X - other displayed value - to be specified with order

<sup>1</sup> In the case of phase to neutral connection, connection scheme on the back side of the synchroscope (upper pictures) is different, connection terminals' designations are "L" and "N".



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